



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,272	02/18/2004	Robert J. Koffron	KOFF 0124 PUS1	2056
22045	7590	10/27/2005	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			KASTLER, SCOTT R	
		ART UNIT	PAPER NUMBER	
		1742		

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/781,272
Filing Date: February 18, 2004
Appellant(s): KOFFRON ET AL.

MAILED

OCT 27 2005

GROUP 1700

Matthew M. Jakubowski
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 09/09/2005 appealing from the Office action mailed 12/29/2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,451,036	EASTWOOD	09-1995
4,709,903	LaBATE	12-1987
4,494,734	LaBATE et al	01-1985

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Claims 1-7, 9, 14-16, 24, 25 and 28-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Eastwood in view of either of Labate et al'734 or LaBate'903. Eastwood teaches a vortex inhibitor (1) comprising a uniform refractory body (2) having a generally tapering shape along a longitudinal axis from a base to a narrow end, and including a hollow chamber (3) which may include a shaft (15) and a "sacrificial member" (10) which may be hollow, and thereby inherently filled with molten metal when inserted into a molten metal bath (see claim 1 for example, where the internal metallic element is only optional), or in the form of a solid bar of metal or refractory (thereby "refractory filled") and optionally coated by a refractory (see col. 3, lines 50-54 for example), with or without the use of a central shaft (14) to which the member is fitted over and connected to the uniform refractory body by extended crimps (see col. 2 lines 48-56 for example) or protrusions (9), where the vortex inhibitor is inherently self orienting when supported in the molten metal, thereby showing all aspects of the above claims except the recitation that the vortex inhibitor have any particular specific gravity, since the member (10) would eventually dissolve in some unspecified molten metal at some unspecified temperature before reaching a discharge nozzle in some unspecified amount of time and the above claims as explained previously, allow for any molten metal at any temperature where the vortex inhibitor is immersed in the molten metal for any time before reaching the discharge nozzle. Both of Labate et al'734 (at col. 1 lines 40-46

Art Unit: 1742

for example) and LaBate'903 (at col. 1 lines 52-55 for example) teach that in order to more surely guide the vortex inhibitor to the tap hole of a metallurgical vessel during tapping, it was well known in the molten metal dispensing art at the time the invention was made to make vortex inhibitors with specific gravities within ranges including those instantly claimed (specific gravities higher than that of molten slag but lower than that of molten steel). Because the system of Eastwood would also desire improved efficiency in placing the vortex inhibitor, motivation to employ a vortex inhibitor with a specific gravity higher than that of molten slag but lower than that of molten steel as taught to be effective for this purpose by either of Labate et al'734 or LaBate'903, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1-12, 14-25 and 28-31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Eastwood in view of either of Labate et al'734 or LaBate'903. As applied to claim 1 above, Eastwood in view of Labate et al'734 or LaBate'903 teaches a vortex inhibitor showing all aspects of the above claims except the specifically recited connection means for connecting the sacrificial member (12) and the uniform refractory body (2), or the use of a sacrificial member of any specific shape. However, Eastwood allows for the use of any desired connection means for connecting parts (2) and (12) including screw means (see col. 2 lines 28-31 for example). Eastwood also allows for of any desired generally tapering refractory shape for the head (2). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the

invention was made because with respect to the particularly claimed connection means, as stated above, Eastwood allows for the use of any desired connection means, and it is officially noted that screw threads, crimps and protrusions are old and well known connection mechanisms in the refractory connection art. It would have been a modification obvious to one of ordinary skill in the art at the time the invention was made to substitute the connection means disclosed by Eastwood and employ any other art recognized equivalent connection means, since Eastwood specifically allows for such a substitution. With respect to the use of any specific configuration for the head portion (2) of Eastwood, it has been well settled that where a component (the head) is shown by the prior art, motivation to alter the shape or configuration of the component without materially altering the function of the component would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See *In re Dailey*, 149 USPQ 47. Therefore, it would have also been obvious to one of ordinary skill in the art at the time the invention was made to employ a head member in Eastwood where the member is of any desired shape, since Eastwood allows for any desired generally tapering configuration of the head member and the shape of the head member has not yet been shown to materially alter the operation of the member or the apparatus as a whole.

(10) Response to Argument

Appellants argue that since the "means for orienting" in the appealed claims is recited in proper means plus function language and the term is defined in the specification as a rod or hollow or solid metal which can be coated with refractory

Art Unit: 1742

material (pages 5 and 9 of the specification), that Eastwood's member (12) cannot meet the limitation of a means for orienting because the member of Eastwood is not intended to dissolve during the pouring of molten metal. This argument is not convincing because Eastwood clearly teaches a "means" including a shaft (15) and a "sacrificial member" (10) which may be hollow, and thereby inherently filled with molten metal when inserted into a molten metal bath (see claim 1 for example, where the internal metallic element is only optional), or in the form of a solid bar of metal or refractory (thereby "refractory filled") and optionally coated by a refractory (see col. 3, lines 50-54 for example), with or without the use of a central shaft (14) to which the member is fitted over and connected to the uniform refractory body by extended crimps (see col. 2 lines 48-56 for example) or protrusions (9), thereby meeting all of the means plus function limitations appearing in the specification and appealed claims, since the shaft also serves to orient the assembly in a downward position. With respect to appellant's argument that since the member of Eastwood is not intended to dissolve during the pouring, this is at best method of use limitation which could be met by Eastwood, since no melt temperature or pouring time is recited in any of the appealed claims or specification, thereby allowing for the use of any melt temperature or pouring duration, some combination of which would serve to dissolve the tail member of Eastwood prior to the ending of the pouring cycle. It has been well settled that where an apparatus disclosed by the prior art can operate in the manner intended by the claims, whether or not the intended manner or method of use is recited, or even desired by the prior art, the manner or method of use of an apparatus cannot be relied upon to distinguish claims to the apparatus itself from the prior art. See MPEP 2114 and *In re Casey*, 152 USPQ 235. Again, since the "tail" member of Eastwood meets

Art Unit: 1742

the structural requirements of the “means for orienting” recited in the appealed claims, serves to orient the member (2) of Eastwood in a downward direction, and if deposited in some unspecified metallic melt at some unspecified temperature for some unspecified time, would dissolve prior to the ending of the pouring operation, the tail member of Eastwood, as applied in the final rejections recited above, meets the requirement of a “means for orienting” where such means must include a hollow chamber which may include a shaft and a “sacrificial member” which may be hollow or in the form of a solid bar of metal or refractory and optionally coated by a refractory with or without the use of a central shaft to which the member is fitted over and connected to the uniform refractory body by extended crimps or protrusions and which, when placed in some, unspecified metallic melt at some unspecified temperature which is poured from a nozzle at some unspecified rate for some unspecified duration, both serve to orient the vortex inhibitor in a downward direction and dissolve (become a “sacrificial member”) prior to the end of the pouring cycle.

Art Unit: 1742

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Scott Kastler

**SCOTT KASTLER
PRIMARY EXAMINER**

Conferees:


ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700


CAROL CHANEY
SUPERVISORY PATENT EXAMINER